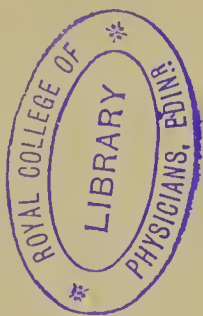


Dr. Allen Thomson.



(From the Proceedings of the Philosophical Society of Glasgow,
Vol. xv., 1883-4.)

DR. ALLEN THOMSON.

[Read before the Society, 30th April, 1884.]

ALLEN THOMSON was born in Edinburgh, on the 2nd of April, 1809, and he died in London, on the 21st of March, 1884, having thus nearly completed his seventy-fifth year. For nearly half a century he held a prominent position among scientific men, and for thirty years he was closely connected with Glasgow, as an eminent citizen who took his part in promoting the common well-being, and as one of the most distinguished professors in the university. Further, as for thirty-five years he was a member of our Society, and at one time its President, it is becoming and respectful to his memory that at a Meeting of the Philosophical Society of Glasgow there should be read an account of who he was and what he did.

He was the son of Dr. John Thomson, who became successively Professor of Military Surgery and of Medicine and General Pathology in the University of Edinburgh, and of Margaret, the third daughter of John Millar, Advocate, who was Professor of Law in the University of Glasgow in the latter half of last century (from 1761 to 1801). Allen Thomson wrote a biographical notice of his father,* from which we learn that his grandfather was a silk weaver, who came from Kinross, where at one time he was rather prosperous in the world. Adverse circumstances compelled his grandfather to settle in Paisley, where for many years he had a struggle in rearing his family. John Thomson, one of the sons (born 1765—died 1846), was apprenticed to his father's trade, but, like many a Scotch youth, he loved learning, and strove

* John Thomson's "Life of Cullen," 2nd edition, 1859.

to get it under adverse circumstances.* His father, who was an Anti-burgher Seceder, hoped to see his son John a minister in that worthy body of dissenters, and was not a little annoyed when he found he had a strong predilection for the study of medicine. However, he gave way, and John Thomson, after studying in Glasgow and Edinburgh, became one of the foremost physicians and pathologists of his time, and occupied two chairs successively in the University of Edinburgh, both of which were founded on his recommendation.† He was a man of great erudition and force of character, and he made important contributions to the medical science of his day.

Whilst he was a House-Surgeon in the Royal Infirmary of Edinburgh, John Thomson became the friend of John Allen,‡ who at one time lectured on physiology in Edinburgh, and who afterwards, drifting into a politico-literary career, became the private secretary and confidential friend of Lord Holland. This John Allen was in his day a prolific writer on political subjects, but he is probably best known as the author of the well-known book on the "Rise and Growth of the Royal Prerogative in England." His name was given to the subject of this memoir, and thus we can trace the origin of the familiar name of Allen Thomson.

John Thomson was twice married. By his first marriage he had three children, the most remarkable of whom was Dr. William Thomson, who was Professor of Medicine in the University of Glasgow from 1841 to 1852; and by the second marriage he became the father of Allen Thomson. The home in which Allen Thomson was reared in Edinburgh was no doubt one of plain living and high thinking, as his father must have had the same kind of struggle as all must encounter who aim at establishing a professional and scientific reputation in Edinburgh, where the contest is always keen and the prizes few. Of this period of

* "Professor Thomson was originally intended to be a weaver, and laid the foundation of his future eminence by laborious study while following that occupation. He had the books he was studying always lying open at the side of his loom, and he never lost a moment he could spare in making use of them."—Biographical notice of John Allen, prefixed to "Inquiry into the Rise and Growth of the Royal Prerogative in England," by John Allen, 1849.

† Sir Alexander Grant's "Story of the University of Edinburgh" Vol. II., p. 441.

‡ John Allen, born at Redfoord, Parish of Colinton, near Edinburgh, 3rd February, 1771; died 10th April, 1843.

Allen Thomson's career we have an interesting reminiscence just published in the "Memoirs of Life and Work" of Dr. C. J. B. Williams, who states that in 1820 he was a pupil resident in the house of Dr. John Thomson, first in John Street, Canongate, and afterwards at Minto House, Argyll Square.* He says:—"He received from six to eight other pupils. We were well fed, and generally made comfortable, and I must say that I was always treated with kindness by both Dr. and Mrs. Thomson, and during the whole of my stay of four years we never had any disagreement. It was not so with some of the other students, and there were many changes of companions during my sojourn." At this period, Allen Thomson was about eleven years of age, and it is interesting to have a glimpse of the circumstances of his father's household, given us by one still alive, who sixty-four years ago was one of the family.

Allen Thomson was educated at the High School and University of Edinburgh and at Paris, and he graduated as Doctor of Medicine at the University of Edinburgh in 1830. It is significant of the bent of his mind towards embryology, the department of science in which he afterwards acquired honourable distinction, that his graduation thesis was "On the Development of the Vascular System in the Fœtus of Vertebrated Animals."† At the time of graduation he was President of the Royal Medical Society, a students' society which has contributed not a little to the fame of the medical school of Edinburgh, inasmuch as in the roll of its Presidents will be found the names of many who in after life became leaders in the profession. The year after graduation—1831—he became a Fellow of the Royal College of Surgeons, and he travelled on the Continent, especially in Holland and Germany. During this tour he visited many anatomical and pathological museums, and took elaborate notes of what he saw. This appears to have been a practice in early life, and I have before me many note-books full of details, carefully recorded in the neat handwriting which was characteristic of him up to nearly the end of his life. These notes are descriptions of special preparations, anatomical and pathological, with shrewd critical remarks.

On his return to Edinburgh he started as an extra-academical lecturer on anatomy and physiology. In this undertaking he was associated with the late Dr. William Sharpey, who ultimately

* "Memoirs of Life and Work," by Dr. C. J. B. Williams. 1884.

† *Edinburgh New Philosophical Journal*, 1830, p. 295.

became Professor of Physiology in University College, London, and with whom Dr. Thomson maintained a life-long friendship of the closest possible character. In those days it was no light undertaking to become a teacher of anatomy in Edinburgh. The Anatomy Act was not passed till 1832, and the public mind was still excited by the notorious proceedings of Burke and Hare. In the University, the third Munro filled the Chair of Anatomy, but the great bulk of the students flocked to listen to the brilliant prelections of the celebrated Robert Knox, who in one year about this period had an extra-mural class numbering 504. Knox was unrivalled as a lecturer, and, as he brought his powers of ridicule and sarcasm to bear on all opponents, Dr. Thomson and his coadjutor came in for their full share.* About this time also a number of men, who afterwards became famous, were either students or extra-mural teachers, and there was the keen contest of able intellects, and the rivalry of a noble ambition. It is sufficient to mention the names of John Reid, John Goodsir, Edward Forbes, William B. Carpenter, and John Hughes Bennett. All became distinguished in biological science, and in such an atmosphere of thought it is no wonder that Allen Thomson was encouraged to prosecute a purely scientific career. None of these remain except Dr. Carpenter, who must feel that the death of his friend Allen Thomson is the severance of another link connecting him with what was undoubtedly a brilliant epoch in the history of the Edinburgh medical school.

In 1833 he travelled for nearly three months with his father on the Continent, visiting the principal medical schools in Holland, Germany, Italy, and France. It is very interesting to find, in his brief but carefully written Journal, that he saw and conversed with some of the most famous men of the period. Thus at Bonn he saw Treviranus (the younger), Bischoff, Neumann, and Mayer. He visited an Insane institution at Sieburg under the care of a Dr. Jacobi, and was specially impressed by the amount of freedom allowed to the patients; but there are still indications of irrational practice, as when he notes:—"The wheeling chair is not often used." At Heidelberg he visited Tiedemann, and carefully inspected his museum. Here he also saw Naegele, celebrated in obstetrical practice. At Tübingen he saw Autenrieth, and at Freyburg, Leuckhart, so well-known from his investigations into

* See "Life of Robert Knox, the Anatomist." by Henry Lonsdale, 1870, p. 262.

the history of intestinal worms. At Zürich he heard clinical lectures from Schönlein, one of the leaders in the German clinic. Here he also saw Oken, the leader of the school of what was then termed transcendental anatomy, and who disputed with Goethe the honour of being the discoverer of the vertebral construction of the skull. Obligated to leave Germany on account of political feeling, Oken had accepted the office of rector and of professor in the recently established University of Zürich. At Parma we find him recording :—"The University is in great part broken up, and about half of the building is occupied as a barracks for soldiers, in order to repress the revolutionary spirit of the students." At Bologna, the birth-place of modern electrical science, the scene of Galvani's labours, we find him stating :—"They have immense electrical and galvanic apparatus, also some electro-magnetic. The lecture room is a fine one, though for seeing the experiments the students are rather far off. The University is at present in disgrace, and no lectures are allowed to be given in it except the experimental ones, or more particularly the Anatomical, which could not be removed to another place. The other professors are obliged to give their lectures at their own homes. Soldiers are placed at the door of the University." This gives one a glimpse of the state of matters whilst Italy was under the yoke of the Austrian, and it is a satisfaction to know that the Italians, in their present regime of political freedom, now contribute their fair share to all departments of scientific progress. During the homeward journey Allen Thomson and his father specially visited Lyons and Paris, but the journals are not so full of detail regarding these places.

During a part of 1837 he travelled on the Continent with the then Duke of Bedford, and in a journal he has left records chiefly of Paris. The Duke appears to have been an invalid, with a dash of hypochondriasis, and it must have been no easy matter to meet his whims and fancies. Judging also from the record of the treatment carefully recorded by Dr. Thomson, we cannot help thinking that the Duke might possibly have been in a better state of health had he received less opium, blue pill, and black draught, all of which, however, were given quite in accordance with the professional views of the period. It is more interesting to turn from the account of his noble patient to that of a visit made to a meeting of the Académie des Sciences, where we are thrown in imagination into the society of the great scientific Frenchmen, not of the last generation but of the one immediately preceding it.

He writes :—"Went at $\frac{1}{2}$ past 2 to a Meeting of the Académie des Sciences at the Institute. Heard several reports, and M. Biot made remarks on polarization, but did not hear him well. M. Magendie showed a man who was under treatment for deaf and dumb affection by passing currents of electricity through the nerves and with considerable success. Mentioned several cases of amaurosis in which electricity has been beneficial. I saw the following men of note :—Arago, Gay Lussac, Dulong, Biot, Geoff. St. Hilaire, Isidore St. Hilaire, Becquerel, Magendie, Chevreul, Lassaigne, Audouin, Milne-Edwards, Savart, Flourens, Dutrochet, Larrey, Sevres, Blainville, Breschet, Dumas, Duméril, Cagniard de la Tour, Payon, and others whose names I forget. Flourens presided, supported on the right by Arago, and on the left by Magendie and Becquerel. The whole seance was conducted with a great deal of philosophical propriety, whilst it was business like." This was on the 18th of December, 1837, forty-seven years ago, and there still lives one of that distinguished group, the veteran chemist and physicist, Chevreul, now in his ninety-eighth year, whose thoughts are no doubt well expressed by the poet:—

* "When I remember all
 The friends, so linked together,
 I've seen around me fall
 Like leaves in wintry weather ;
 I feel like one
 Who treads alone
 Some banquet hall deserted,
 Whose lights are fled,
 Whose garlands dead,
 And all but he departed !" *

The year 1839 saw Allen Thomson appointed Professor of Anatomy in the Marischal College and University of Aberdeen ; but in 1841 he resigned that office, and again became a teacher of Anatomy in the extra-mural school in Edinburgh. In 1841 Professor Alison resigned the Chair of Institutes of Medicine or Physiology in the University, and in 1842, after a severe contest with competitors no less formidable than Robert Knox, John Reid, and William B. Carpenter, Dr. Thomson was appointed his successor. At this period the patronage of the chairs lay in the hands of members of the Town Council, and if their appointments were on the whole very good, they gave occasion for making the

* "Light of other days." T. Moore.

election to a chair in the University not unfrequently a party fight, in which the testimonial and private influence systems were carried to an extent almost unknown in our day.

He held the chair in Edinburgh for six years, and during this time made several important contributions to the science of Embryology. These researches were more morphological than physiological; that is, they had to do more with development of form than with development of function, and they clearly indicated that Dr. Thomson's mind inclined more to the anatomical than to the physiological side of biology. It was not surprising, therefore, that when an opportunity offered, he should return to his first love, Anatomy. This was accomplished by his appointment to the Chair of Anatomy in the University of Glasgow in 1848, when he succeeded Dr. James Jeffray. He had now the unique experience of having been a Professor in three out of the four Scottish Universities. This chair he held with great distinction for 29 years, resigning it in 1877, when he was succeeded by my distinguished colleague, Professor Cleland. During these years he was an indefatigable worker, not merely in connection with the immediate duties of his chair, but as a contributor to scientific literature. His early work brought him reputation as an embryologist, and he kept it up by many important papers on the same department of science. In addition, he wrote on physiological optics, more especially on the mechanism by which the eye accommodates or focusses itself for objects at different distances. He was one of the first also to bring under the notice of British physiologists the researches of the Webers on the tactile sensibility of the skin, and he wrote largely for the great anatomical and physiological cyclopædia edited by Dr. Todd. His name will also be long associated with Quain's "System of Human Anatomy." He was the principal editor of the descriptive part of the seventh and eighth editions. In the seventh edition he was associated with Professor Sharpey and Professor Cleland; in the eighth with Professor Sharpey and Professor Schäfer; and in the ninth and last with Professor Schäfer and Professor Thane, both of University College, London. It is well known that Dr. Thomson, both with pen and pencil, made important additions to this great work.

During his career Dr. Thomson received many scientific honours. He was elected a Fellow of the Royal Society of Edinburgh in 1838, and of the Royal Society of London in 1848, and after his

removal to London in 1877, he became first a councillor of the Royal Society, and ultimately one of the vice-presidents. He became a member of the Philosophical Society of Glasgow on 1st December, 1849, being recommended by Dr. Thomas Thomson, Dr. R. D. Thomson, and Dr. Andrew Buchanan, and he was raised to the office of President in 1854. He also filled the office of President of the Medico-Chirurgical Society, and of the Science Lectures Association in Glasgow. In our city, also, he was the first President of the local branch of the British Medical Association. He was for 18 years a member of the General Medical Council, where his ripe experience and calm judgment enabled him to do good service to the cause of medical education. In 1871 he was President of the Biological Section of the British Association at the meeting in Edinburgh; and in 1876 the Association conferred on him its highest honour by electing him to the Presidential Chair. This he filled with much acceptance in 1877 at the meeting at Plymouth, when he delivered an able address on his favourite subject, "The Development of the Forms of Natural Life." In 1871 Dr. Thomson received from Edinburgh the degree of LL.D. This degree was also conferred by Glasgow University in 1877; and in 1882 he received the degree of D.C.L. from the University of Oxford. Latterly, also, he was elected to at least one Syndicate of the University of Cambridge, to assist in the election of professors to biological chairs—a high mark of the confidence reposed in his judgment by the University.

Whilst thus pursuing a scientific career, Dr. Allen Thomson was well known for many years as one of the most active and influential men in the city of Glasgow. He was always ready to aid in any good cause, and he took a prominent part in various great public undertakings. In particular, he acted as chairman of the Removal and Buildings Committee of the University of Glasgow from 1863 to 1874, which led to the erection of the University Buildings on Gilmorehill, and it is not too much to say that the carrying out of this great scheme was largely due to his energy and tact, and to the confidence reposed in him, both by the merchants of Glasgow and by his colleagues in the Senatus. A full account of all matters relating to the University of Glasgow New Buildings will be found in a "Report by the Chairman of the University Removal Committee."* This report was written by Dr. Allen Thomson, and

* Glasgow: Bell & Bain, 41 Mitchell Street, 1877.

was presented by him to the senate of the University on his resigning the offices of chairman of the Removal and Building Committee, which he had held since 1863. It is to be regretted that Dr. Thomson and those consulting with him did not make sufficient allowance for the probable increase in the number of students, and that, therefore, the class-rooms and laboratories are already too small. Still, we must recollect that it is easy to be wise after the event, and that at the time Dr. Thomson superintended the drawing of the plans there was no reasonable likelihood the increase in students would be so great as it has proved to be, and we must, therefore, not be too critical regarding the proceedings of the man whose energy, influence, and tact, did much to get for Glasgow the splendid University Buildings she possesses.

Keenly alive also to the interests of the medical school of the University, and to the growing needs of the west end of the city and suburbs, Dr. Thomson took an active part in the erection of the Western Infirmary. This noble institution is a model hospital, and during its earlier years Dr. Allen Thomson, as a member of the Board of Directors, assisted in making it what it is. The best evidence of this is the following extract from the Minutes of the Board of Managers of the Western Infirmary:—

“At Glasgow, and within the Secretary’s Office, 11 Bothwell Street, the 25th day of March, 1884, at 10.15 a.m.

“Being a Meeting of the Board of Managers of the Glasgow Western Infirmary.

“JAMES HAMILTON, Esq., in the Chair.

* * * * *

“The Chairman also made feeling reference to the death of Dr. Allen Thomson. Dr. Thomson had been one of the most zealous promoters of the scheme to establish the Western Infirmary. He was also a Member of the first Board of Managers, in which capacity he continued to act till November of 1876, when he removed to London. During this period Dr. Thomson’s wide experience in Hospital Management, combined with his judicious and kindly manner in dealing with difficult and sometimes delicate questions, were of infinite value to the Institution. Though Dr. Thomson had removed to London he was always glad to hear of the prosperity of the Infirmary, and he (the Chairman) believed he expressed the sentiments of every one present when he moved that a formal expression of their sympathy be sent to Mrs. Thomson and family. Mr. Hannay also referred to Dr. Thomson in similar terms, and the proposal was unanimously agreed to.”

It is well known that he was especially proud of having been connected with these two great undertakings—the University

Buildings and the Western Infirmary—and it is not unlikely that their successful completion brought more happiness and solace to his mind than the reception of his numerous scientific honours.

It is somewhat difficult to give a critical estimate of Dr. Thomson's position as a man of science. As already stated, it was in the field of embryology that he won his laurels. His first paper on this subject was his Inaugural Dissertation or Thesis on taking the degree of Doctor of Medicine in the University of Edinburgh in July, 1830, and is entitled, "On the Development of the Vascular System in the Fœtus of Vertebrated Animals." It deals chiefly with an account of the early changes following impregnation, and is an excellent *resumé* of the state of scientific opinion up to that date. The older authors were aware that ova were found in the oviduct and uterus, and that they were derived from the Graafian vesicle, but it was not until 1827 that Von Baer discovered the mammalian ovum in the Graafian vesicle of the dog. Previous to this time, Caspar Frederick Wolff, of St. Petersburg, in 1759, and Christian Pander, at Würzburg, in 1817, had so far traced the development of organs; but they were ignorant of the earlier changes, and we date the rise of modern embryology from the discovery of Von Baer in 1827. The germinal vesicle in the ovum of birds was discovered by Purkinje in 1825, in mammals by Coste in 1834, and by Wharton Jones about the same period, whilst the germinal spot was first observed by Wagner in 1834. The division of the yolk after fecundation was first noticed in the ova of frogs by Prevost and Dumas, and afterwards by Rusconi, Baumgaertner, and Von Baer, and more particularly described by the latter. Changes in the cells of the yolk, or of the portion of it now called the blastoderm or germinal membrane, were first studied by Schwann about 1835, and he also made the important observation that the ovum itself is a cell. The division of these cells into two layers or laminae—the upper the serous, and the lower the mucous, now called respectively the epiblast and the hypoblast—was traced by Von Baer between 1833 and 1835. The next great steps were taken by Von Bischoff, who, between 1842 and 1854, traced the development of the mammalia; and by Remak, whose works on the development of birds and batrachia appeared from 1850 to 1855.*

* For an interesting historical account of these discoveries, see Allen Thomson's article, "Embryology," in the ninth edition of the "Encyclopædia Britannica."

Now, it cannot be said that Allen Thomson's name will be associated with any particular discovery in this department of science, but he did more than anyone between 1830 and 1850 to make the researches of the Germans familiar to his countrymen. Prior to 1830, little was known of embryological science in this country, and even between 1830 and 1845 almost its only expositor was Allen Thomson.* But he was more than a mere expositor of the German writers. His papers abundantly show evidence of personal investigation and critical inquiry. It was this that gave his writings permanent value, and constituted him an authority in one of the most difficult departments of science. He grasped firmly many of the problems of embryology, and he saw clearly that they were to be solved by patient inquiry into the development of all animal forms. Thus the comparative method had always great attractions for him, and it gave zest and breadth to his studies. This is evident in all his writings, more especially in the important articles he wrote for Todd's "*Cyclopædia of Anatomy and Physiology*." Thus, so long ago as 1844, we find him alluded to in these terms in "*Wagner's Physiology*":—"The best and most comprehensive view of the whole subject of generation, grounded on personal observation, which we possess is that by Dr. Allen Thomson, in his article '*Generation*,' in Todd's '*Cyclopædia of Anatomy and Physiology*,' vol. ii."†

Throughout life he worked hard to keep pace with the rapid progress of embryological science, and no one rejoiced more at the attention given to it by a rising school of British embryologists, nor mourned more deeply over the sad death on the Alps of its leader, the late Francis M. Balfour, of Cambridge.

It would serve no useful purpose to enter into a critical estimate of all his writings, a list of which I append to this account of his life. In his embryological papers he traced chiefly the development of organs, more especially those of the circulation and of the genito-urinary system; and, as he was an able draughtsman, he has stereotyped his conceptions in diagrams, still met with in almost every text-book of anatomy and physiology. Probably the most important of his other writings are those on the mechanism of accommodation

* Other two workers in this field ought to be mentioned—Martin Barry and T. Wharton Jones.

† "*Wagner's Elements of Physiology*," translated by Robert Willis, London, 1844.

of the eye, in which there is a great store of information as to the opinions of the older authors on this subject, and in which he makes a critical examination of the views of Cramer, Donders, and Helmholtz. He repeated many of the experiments of these distinguished observers, and corroborated their results. All his writings were characterised more by fulness of knowledge, clearness of statement, and soundness of judgment than by originality. The only weak feature of his mental development was an excess of caution in coming to a conclusion. This prevented him from making any broad generalisation with which his name will be associated.

Allen Thomson took a deep interest in many departments of science. He was not a specialist, as some suppose. He was a naturalist in the truest and best sense, and in a sense not understood so well in these days, when the very extent of knowledge sometimes seems to force men to become narrow and contracted in their views of the universe. Hence, he entered warmly into all scientific questions, and long he pondered on some of the problems towards the solution of which all science is tending. He might well say with Wordsworth:—

“For I have learned
To look on Nature, not as in the hour
Of thoughtless youth ; but hearing oftentimes
The still, sad music of humanity,
Nor harsh nor grating, though of ample power
To chasten and subdue. And I have felt
A presence that disturbs me with the joy
Of elevated thoughts ; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of men :
A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things.”*

He was a ready listener, and he was always delighted to hear an account of a new investigation. Eager in the pursuit of truth himself, he above all things demanded accuracy, and sometimes he was apt to disconcert a beginner by doubting some of the alleged facts, or by offering arguments against the view placed before him. He was critical in all such questions, and it required a great deal

* Lines composed a few miles above Tintern Abbey, on revisiting the banks of the Wye during a tour.—William Wordsworth.

of fact and argument to lead him to a change of scientific opinion. Yet his mind was open and receptive, and he did not shrink from a change of view, although it went against his preconceived notions. As an example of this I may mention his general acceptance of the important generalisations of Darwin.

His own writings are models of clearness of statement and skilful marshalling of facts—indeed, to such an extent are these qualities developed as to give an unnecessary baldness to some of his papers, Dr. Thomson's mode of teaching was of the same character. Method, order, precision of statement, close reasoning, shone in every lecture, and there was also the persuasive eloquence of a quiet enthusiasm which captivated the listener. This was noticeable even in a popular lecture, as, for example, in the lecture on the brain he delivered some years ago in Glasgow before the Science Lectures Association, where the stately march of his sentences indicates a style as different as can be from the colloquial method of the common popular lecture.

He was wise in council, and his long experience, conveyed in a quiet, persuasive tone of voice, often cut the knot in troublesome questions. He had a strong faith in delay in coming to a decision on disputed points if the decision was likely to cause rancour and ill-feeling; and if this temporising spirit sometimes led to further difficulties and complications, it as often turned away wrath, and gave men time to consider the question more fully. He was thus a peacemaker, whilst at the same time, by patience and tact, he frequently was able to carry out precisely the policy on which his heart was set. In the social circle there was much gentleness and simplicity of manner, along with a keen sense of humour. It would be impertinent to say anything more of his domestic life than that it was characterised by a quiet kindliness, and that chivalrous attention to little details of personal courtesy which mark the true gentleman. His qualities of head and heart, however, do not require to be set forth. One can never forget the kindly courtesy, the simplicity of address, the indescribable charm of his manner, the warmth of his friendship. I saw him a few weeks before his death, and it was touching to find the aged anatomist paying the penalty of his knowledge by being able to trace the neuralgic pains from which he suffered, along the nerves, whose course he well knew. He was then hopeful, and his natural cheerfulness was unabated. It is difficult to imagine that the bright, keen intelligence, so alive to all that pertains to progress in knowledge,

and to the welfare of humanity, is now beyond us; but his memory will long remain in Glasgow, and in the hearts of thousands of his pupils. He died full of years and of honour; and it is a satisfaction to think that, after a long and busy life he had a few years of peaceful retirement, listening to the innocent prattle of his grandchildren, and enjoying in London the society of kindred scientific spirits.

Dr. Thomson left a widow, the daughter of Mr. Ninian Hill, Writer to the Signet, Edinburgh, and an only son, Mr. John Millar Thomson, Lecturer on Chemistry in King's College, London, and one of the Secretaries to the Chemical Society. On his retirement in 1877, his portrait, painted by the late Sir Daniel Macnee, was presented to the University and now hangs in the Hunterian Museum. Although wanting the classical refinement of expression characteristic of Dr. Allen Thomson, it is on the whole a good likeness, and will hand down the well-known form and features to future generations.*

In one of his last visits to Glasgow he wrote in an album a few well-known lines which, I think, so fully represent his philosophy and give us the secret of his successful and happy life, that I shall quote them in bidding our friend farewell.

“ It's no' in titles nor in rank,
 It's no' in wealth like Lon'on bank,
 To purchase peace and rest;
 It's no' in makin' muckle mair,
 It's no' in books, it's no' in lear,
 To make us truly blest;
 If happiness ha'e not her scat
 An' centre in the breast,
 We may be wise, or rich, or great,
 But never can be blest.”

JOHN G. M'KENDRICK.

*An account of his last illness is given in the “Lancet” of 12th April, 1884.

LIST OF ALLEN THOMSON'S WRITINGS.

1. On the Development of the Vascular System in the Fœtus of Vertebrate Animals. Graduation Thesis. Edinburgh New Philosophical Journal, Vol. ix., 1830, p. 295, and Vol. x., p. 88, and p. 251. Abstract in Edinburgh Medical Journal, Vol. xxxvi., 1831, p. 209.
2. A Probationary Essay on the Formation of New Blood Vessels, on the occasion of becoming F.R.C.S.E., in 1832.
3. Accounts of some New Experiments on the Sensibility of the Skin, by Dr. Weber, Professor of Anatomy at Leipsig. Edinburgh Medical Journal, Vol. xl., 1833, p. 83.
4. Contributions to the History of the Structure of the Human Ovum and Embryo before the third week after couception, with a description of some early Ova. Edinburgh Medical and Surgical Journal, Vol. lii., 1839, p. 119.
5. On the origin of Double Monsters. Edinburgh Monthly Journal of Medical Science, 1844.
6. A description of congenital malformation of the auricle and external meatus of both sides in three persons, with experiments on the state of hearing in them, and remarks on the mode of hearing by conduction through the hard parts of the head in general. Proceedings of Royal Society of Edinburgh, 1845.
7. On the Co-existence of Ovigerous and Spermatic Capsules on the same individuals of the Hydra Viridis. Edinburgh New Philosophical Journal, Vol. xlii., 1846-7, p. 281.
8. Outlines of Physiology, for the use of students. 12mo, pp. 308. 1848.
9. On the structure of the Glands of the Alimentary Canal. Annals of Anatomy and Physiology, by John Goodsir, p. 33. 1850.
10. Notice of the Dissection of a case of Lateral Transplantation of the Viscera of the Thorax and Abdomen in a man. Glasgow Medical Journal, Volume First, 1854, p. 216.
11. Remarks on the Comparison of the Ovarian Ovum of Birds and Mammiferous Animals. Edinburgh Monthly Journal of Medical Science, 1855, p. 97.
12. Notice of recent Researches on the origin of Entozoa, more especially of Tape Worms. Glasgow Medical Journal, Volume Third, 1856, p. 178.
13. On the formation and structure of the Spermatozoa in Ascaris mystax. Reports of British Association, 1855, p. 138.
14. On the Brain of Troglodytes niger. Reports of British Association, 1855, p. 139.
15. Contributions to the History of Fecundation in different Animals. Reports of British Association, 1855, p. 139.
16. On unusual Mobility of the Iris, his own case, by John Paxton, M.D., Kilmarnock, with remarks by Dr. Allen Thomson, in a letter to the Editor. Glasgow Medical Journal, Volume Fourth, 1857, p. 451.

17. Further remarks on Dr. Paxton's case, with observations on the Structure and Action of the Parts concerned in the Focal Adjustment of the Eye. *Glasgow Medical Journal*, Volume Fourth, 1857, p. 456.

18. On the Phenomena and Mechanism of the Focal Adjustment of the Eye to Distinct Vision at different distances. *Glasgow Medical Journal*, Volume Fifth, 1858, p. 50.

19. Notice of the case of Mons. E. Groux, in which a congenital fissure of the Sternum exposes partially to observation some of the movements of the organs of the circulation. *Glasgow Medical Journal*, Volume Sixth, 1859, p. 48.

20. Biographical Account of his Father, Dr. John Thomson, prefixed to the Second Edition of John Thomson's Life of William Cullen, Edinburgh, 1859 (the First Edition of Thomson's Life of Cullen was published in 1832); here also is a short Biography of his brother Dr. William Thomson, Professor of Medicine in Glasgow.

21. On the Spinal Cord and Nerves. *Proceedings of Philosophical Society of Glasgow*, 1860.

22. Description of the Dissection of a case of Right Aortic Arch, with Remarks on this and allied Malformations. *Glasgow Medical Journal*, Volume Eleventh, 1863, p. 1.

23. On the Difference in the Mode of Ossification of the First and other Metacarpal and Metatarsal Bones. *Journal of Anatomy and Physiology*, Volume iii., 1869, p. 131. An Abstract of this Paper appeared in the *Glasgow Medical Journal*, Volume i., New Series, 1869, p. 202.

24. Address to the Biological Section of the British Association, 1871.

25. Address as President of the British Association—Report of Forty-seventh Meeting—Plymouth Meeting—1878, p. 68.

26. Contributions to Todd's *Cyclopædia of Anatomy and Physiology*. Vol. i., Circulation, 1835-1836. Vol. ii., Generation, 1836-1839. Supplementary Volume, Ovum, 1859.

27. Seventh Edition of Quain's *Anatomy*, along with Professor Sharpey and Professor Cleland, 1867.

28. Eighth Edition of Quain's *Anatomy*, along with Professor Sharpey and Mr. E. A. Schäfer, 1876.

29. Ninth Edition of Quain's *Anatomy*, along with Professor E. A. Schäfer and Professor G. D. Thane, 1882. The portion on Embryology, Vol. ii., pp. 731-911, wholly written by Dr. Thomson.

30. Report by the Chairman of the University Removal Committee—University of Glasgow New Buildings, Glasgow, 1877.

31. Article "Embryology," in Ninth Edition of *Encyclopædia Britannica*, 1878.

32. Article "Ovum," in Ninth Edition of *Encyclopædia Britannica*, 1884.

17. Further remarks on Dr. Paxton's case, with observations on the Structure and Action of the Parts concerned in the Focal Adjustment of the Eye. *Glasgow Medical Journal*, Volume Fourth, 1857, p. 456.

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